HYDROGEN GAS SENSOR, FUEL CELL SYSTEM AND CONCENTRATION MEASURING METHOD FOR HYDROGEN GAS

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Abstract

PROBLEM TO BE SOLVED: To provide a hydrogen gas sensor which can detect the concentration of hydrogen gas in a gas to be measured, to provide a fuel cell system and to provide a measuring method for hydrogen gas.
SOLUTION: A voltage which is applied across both electrodes 14b, 14c of an oxygen pump cell 14 is adjusted in such a way that an electromotive force across both electrodes 12b, 12c of an oxygen-concentration detecting cell 12 becomes a prescribed value (e.g. 450 mV). Then, a pump current ip which flows in the oxygen pump cell 14 is measured. That is to say, the voltage which is applied to the oxygen pump cell 14 is controlled in such a way that the cocentration of hydrogen gas in a fuel gas inside a gap part 16 becomes substantially zero and that, consequently, &lambda (air-fuel ratio of oxygen to hydrogen) = 1. The pump current ip at this time is measured. The concentration of the hydrogen gas is measured on the basis of the pump current ip.
